

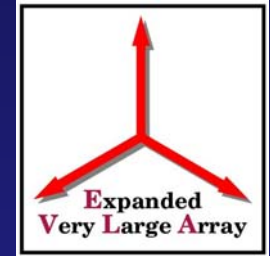
LO/IF System PDR

LO/IF Switches

Doug Scott



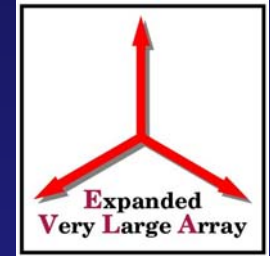
LO/IF System PDR



- Type of Switches (# per antenna)
 - IF High Band Switches (4)
 - IF Low Band Switches (4)
 - IF Transfer Switches (2)
 - LO Switches (2)



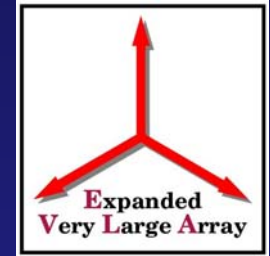
LO/IF System PDR



- IF High Band Switch Specifications
 - Frequency Range: 8 to 12 GHz
 - VSWR: 1.4 to 1 max
 - Insertion Loss: 0.4 db max
 - Isolation: 60 db min
 - # of poles: 1 per switch
 - # of throws: 9 min per switch



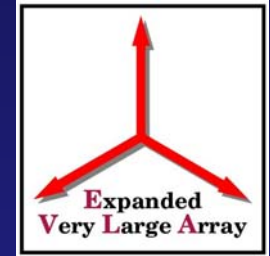
LO/IF System PDR



- IF Low Band Switch Specifications
 - Frequency Range: 1 to 8 GHz
 - VSWR: 1.3 to 1 max
 - Insertion Loss: 0.4 db max
 - Isolation: 70 db min
 - # of poles: 1 per switch
 - # of throws: 6 min per switch



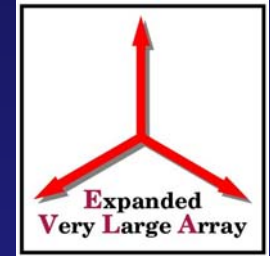
LO/IF System PDR



- IF Transfer Switch Specifications
 - Frequency Range: DC to 12 GHz
 - VSWR: 1.4 to 1 max
 - Insertion Loss: 0.4 db max
 - Isolation: 60 db min
 - # of poles: 2 per switch
 - # of throws: 2 min per switch



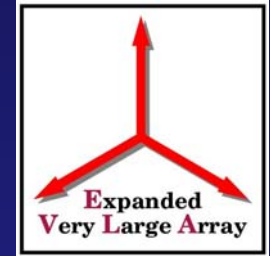
LO/IF System PDR



- LO Switch Specifications
 - Frequency Range: 12 to 20 GHz
 - VSWR: 1.8 to 1 max
 - Insertion Loss: 0.8 db max
 - Isolation: 55 db min
 - # of poles: 1 per switch
 - # of throws: 6 min per switch



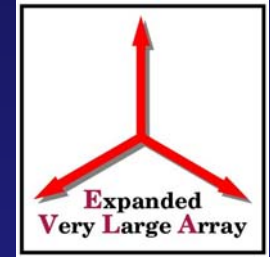
LO/IF System PDR



- Mechanical Switches
 - Better Insertion Loss
 - Better VSWR & BW
 - Better Phase & Amplitude Performance
- Electronic Pin Diode Switches
 - Lower Cost
 - High Reliability



Switch Costs

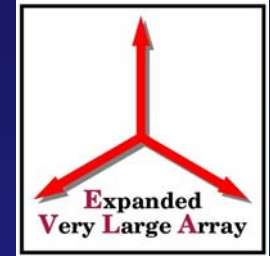


IF High Band	IF Low Band	IF Transfer
\$1775 (1-2)	\$965 (1-2)	\$435 (1-2)
\$1511(3-5)	\$821 (3-5)	\$370 (3-5)
\$1384 (6-10)	\$743 (6-10)	\$328 (6-10)
\$1162 (51-100)	\$612 (51-100)	\$261 (51-100)

LO Switches to use recycled FE switches.



LO/IF System PDR

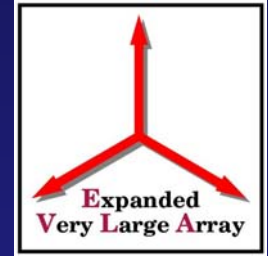


- LO/IF Switch Physical Locations
 - IF High Band, Outside B Rack
 - IF Low Band, Outside B Rack
 - IF Transfer, Inside B Rack
 - LO, Outside B Rack

 - Additional Control Switch Module



LO/IF System PDR



- Current Status
 - Obtaining more switch price quotes
 - Purchase Requisitions signed by 2/02
 - Switches available in 6-10 wks